

Coordinating Agency:

Department of Homeland Security/Science and Technology Directorate

Cooperating Agencies:

Department of Agriculture
Department of Commerce
Department of Defense
Department of Energy
Department of Health and Human Services
Department of the Interior
Department of Justice
Department of State
Environmental Protection Agency
National Aeronautics and Space Administration
Nuclear Regulatory Commission

Introduction

Purpose

The Science and Technology Support Annex describes the national framework through which the Department of Homeland Security/Science and Technology Directorate (DHS/S&T) coordinates with other Federal agencies, in consultation with State, local, and tribal entities and the private sector, to leverage the Nation’s scientific and technical resources to prepare for, respond to, and recover from Incidents of National Significance. It ensures that policymakers and responders at all levels receive coordinated, consistent, accurate, and timely scientific and technical information, analysis, advice, and technology support.

Scope

This annex:

- Describes how DHS coordinates with other Federal agencies and State, local, and tribal governments, the private sector, and academia, where applicable, on preparedness, response, and recovery activities in support of the National Response Plan (NRP).
- Outlines roles and responsibilities for pre-incident and post-incident science and technology support.

- Outlines a structure for coordination of scientific and technological support and response to Incidents of National Significance.
- Outlines a process to provide scientific and technical recommendations to Federal Government decisionmakers to assist in determining appropriate protective measures in the context of potential or actual Incidents of National Significance.

Policies

The underlying principles for the role of the Federal Government in coordinating scientific and technical support are as follows:

- Planning employs the most effective means to deliver scientific and technical support, including the use of resources from the private sector and nongovernmental organizations, and resources owned or operated by Federal agencies.
- Planning recognizes State policies and plans used to deliver and receive scientific and technical support, as well as State-established methods for determining support requirements.

- Support is centrally managed and regionally delivered. DHS manages and coordinates requests for scientific and technical support at DHS Headquarters through the Homeland Security Operations Center (HSOC) and/or Interagency Incident Management Group (IIMG).
- The primary resource for Federal prediction of atmospheric hazards dispersion is the Interagency Modeling and Atmospheric Assessment Center (IMAAC).

Concept of Operations

General: DHS/S&T is responsible for DHS scientific and technical support and coordinates with other appropriate departments and agencies in response to actual or potential Incidents of National Significance.

Organization

- DHS/S&T provides the core coordinating architecture of the Federal scientific and technical support capability. To accomplish its mission, DHS/S&T works with a variety of Federal Government, private sector, and nongovernmental organizations that are capable of providing expert scientific and technical information, analysis, and advice, and state-of-the-art technology support.
- The Federal response to an Incident of National Significance utilizes the combined resources (scientific expertise, research and development capabilities, etc.) of various NRP departments and agencies, tailored to the scenario at hand. DHS/S&T communicates emerging science and technology needs to appropriate Federal agencies through HSOC representatives, the IIMG, and the National Response Coordination Center (NRCC). Federal science and technology resource identification and standard operating procedures for accessing these resources are developed by an interagency working group led by DHS/S&T.
- Using NRP protocols, mission assignments for scientific and technical needs are coordinated through ESF #5 – Emergency Management and passed on to the cooperating agencies for support.
- Major science and technology components include:
 - **Homeland Security Operations Center:** The HSOC provides Federal scientific and technical support elements with relevant situational awareness and threat information reports. DHS/S&T provides an S&T Coordination Desk liaison and an on-call S&T Coordinator for the HSOC. The S&T Coordination Desk Officer serves as the principal staffer responsible for receiving, documenting, forwarding, and tracking scientific and technical support requests. While on-call scientific and technical support assets are mobilized, the S&T Coordination Desk Officer may also serve as an emergency resource for delivering direct scientific and technical support to the field. The S&T Coordination Desk Officer has access to extensive technical databases and reference materials on all topics related to chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) weapons of mass destruction (WMD).
 - **Interagency Incident Management Group:** DHS/S&T provides a senior S&T representative to the IIMG who provides direct operational scientific and technical support for DHS and coordinates with other agencies to ensure that the CBRNE subject-matter expert augmentation needs of the IIMG are met. For some responses, pre-established subject-matter expert groups are part of ESF or Incident Annex planning efforts, and provide appropriate technical advice.

- **National Response Coordination Center:** When the NRCC is activated for an Incident of National Significance, DHS/S&T assigns a representative to ESF #5 to coordinate and facilitate deployment and use of scientific and technical resources.
- **Headquarters S&T Coordination Team:** The S&T Coordination Team is a multidisciplinary staff that provides coordination of Federal scientific and technical support programs and response activities. Operating from DHS Headquarters, the S&T Coordination Team is responsible for staffing and coordinating requests for Federal scientific and technical support. The S&T Coordination Team serves as the central source of information at the DHS Headquarters level regarding the status of ongoing and planned Federal scientific and technical support operations. The S&T Coordination Team also facilitates coordination between regions in the context of multiregion scientific and technical support operations. All team deployments are coordinated with the NRCC, the Regional Response Coordination Center (RRCC), and/or the Joint Field Office (JFO).
- **Scientific and Technical Advisory and Response Teams (STARTs):** STARTs are composed of the experts in key specialty

areas related to CBRNE WMD effects and countermeasures. The teams are primarily designed to provide rapid scientific and technical support through virtual links; however, they can be deployed to the field with short notice. Once activated, STARTs are coordinated and supported by DHS field components, the RRCC, and the JFO. The teams can provide expert scientific and technical information, analysis, and advice, and state-of-the-art technology support. STARTs function in an indirect response support capacity. They do not provide direct services, such as decontamination, medical and health care, or recovery. All activations and deployments are coordinated with the NRCC/RRCC and/or the JFO.

- **Interagency Modeling and Atmospheric Assessment Center:** The IMAAC is responsible for the production, coordination, and dissemination of consequence predictions for an airborne hazardous material release. The IMAAC generates the single Federal prediction of atmospheric dispersions and their consequences utilizing the best available resources from the Federal Government. Guided by an interagency memorandum of agreement, several Federal agencies and departments support IMAAC planning and operations.

Responsibilities

Coordinating Agency: When the NRP is activated in response to a potential or actual Incident of National Significance, DHS, in coordination with other Federal departments and agencies, is responsible for:

- Orchestrating the Federal scientific and technical support to affected States/regions;
- Maintaining STARTs capable of providing short-notice subject-matter expert assessment and consultation services;
- Coordinating the scientific and technical operational priorities and activities with other elements of DHS and Federal departments and agencies;
- Providing DHS/S&T liaisons to other Federal, State, and/or local emergency operations centers, as requested;
- In coordination with responsible agencies and when deemed appropriate, deploying emerging technologies and utilization of advanced research facilities; and
- Executing contracts and procuring scientific and technical support services consistent with the Financial Management Support Annex of the NRP.

Cooperating Agencies: Cooperating agencies provide representation to interagency working groups led by DHS/S&T that are used to identify Federal science and technology resources and the mechanisms to effectively access and coordinate those resources during NRP-related activities. S&T cooperating agencies provide a wide range of capabilities including research and development, laboratory analysis, and computer modeling.